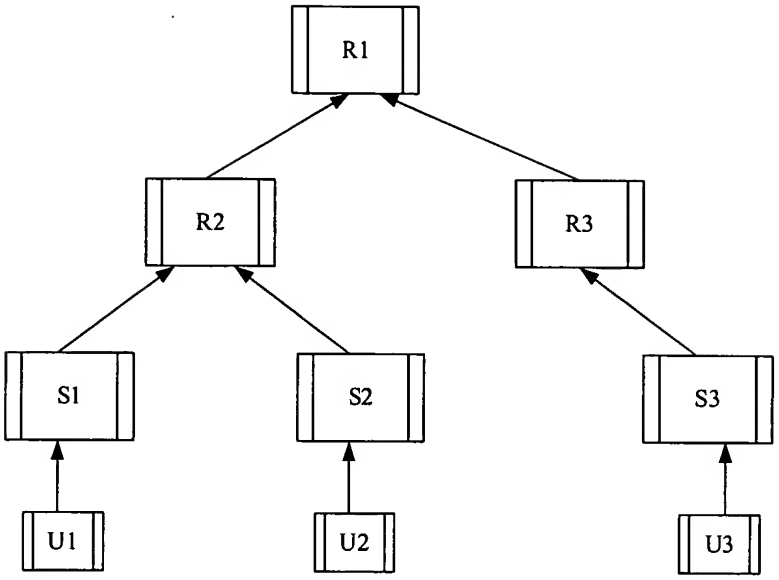
R1
R2
R3
S1
S2
S3
U1
U2
U3

Fig1

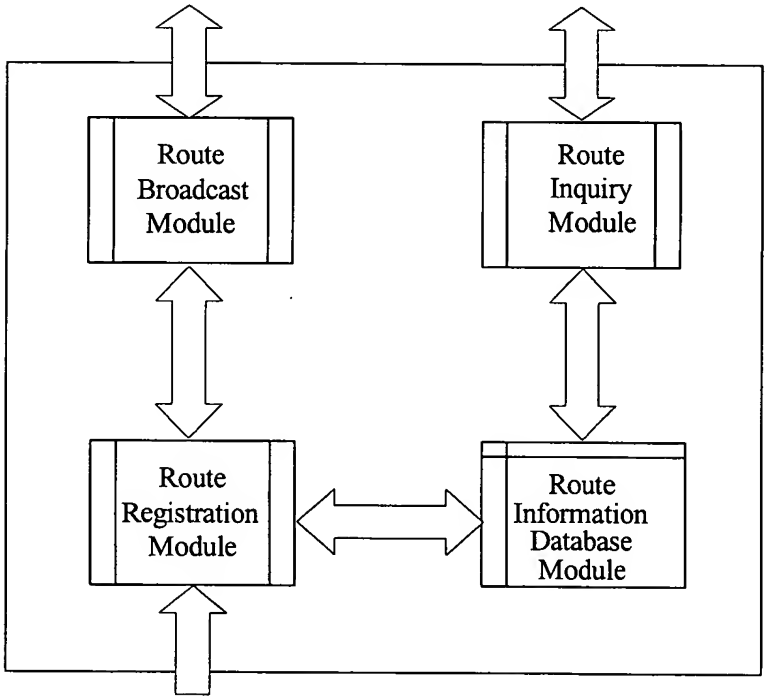
Route Broadcast Module
Route Inquiry Module
Route Registration Module
Route Information Database Module

Fig2

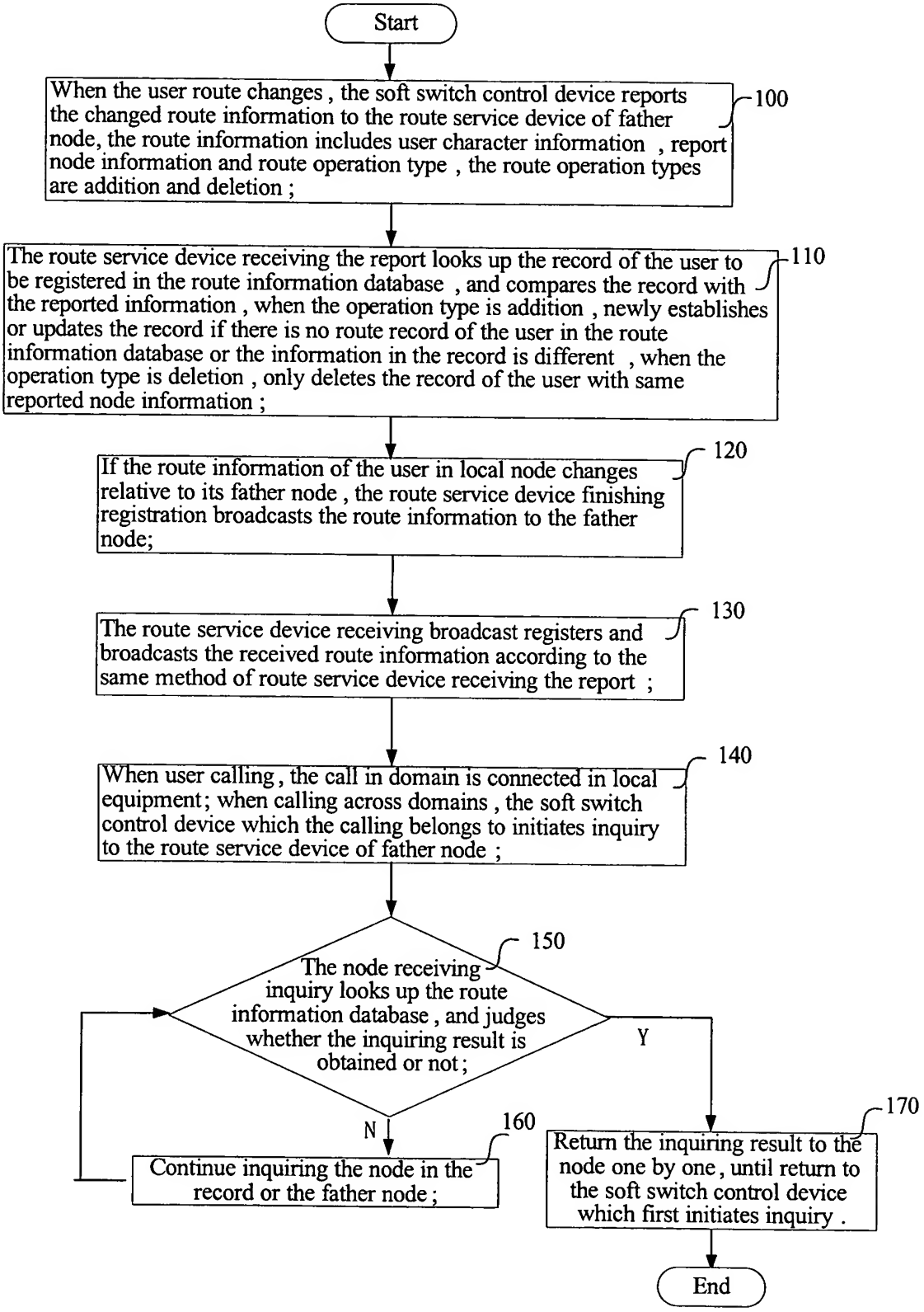
Start
When the user route changes , the soft switch control device reports the changed route information to the route service device of father node, the route information includes user character information , report node information and route operation type , the route operation types are addition and deletion ;
100
The route service device receiving the report looks up the record of the user to be registered in the route information database , and compares the record with the reported information , when the operation type is addition , newly establishes or updates the record if there is no route record of the user in the route information database or the information in the record is different , when the operation type is deletion , only deletes the record of the user with same reported node information ;
110
If the route information of the user in local node changes relative to its father node , the route service device finishing registration broadcasts the route information to the father node;
120
The route service device receiving broadcast registers and broadcasts the received route information according to the same method of route service device receiving the report ;
130
When user calling , the call in domain is connected in local equipment; when calling across domains , the soft switch control device which the calling belongs to initiates inquiry to the route service device of father node ;
140
The node receiving inquiry looks up the route information database , and judges whether the inquiring result is obtained or not;
150
Y
N
Continue inquiring the node in the record or the father node;
160
Return the inquiring result to the node one by one, until return to the soft switch control device which first initiates inquiry .
170
End

Fig3

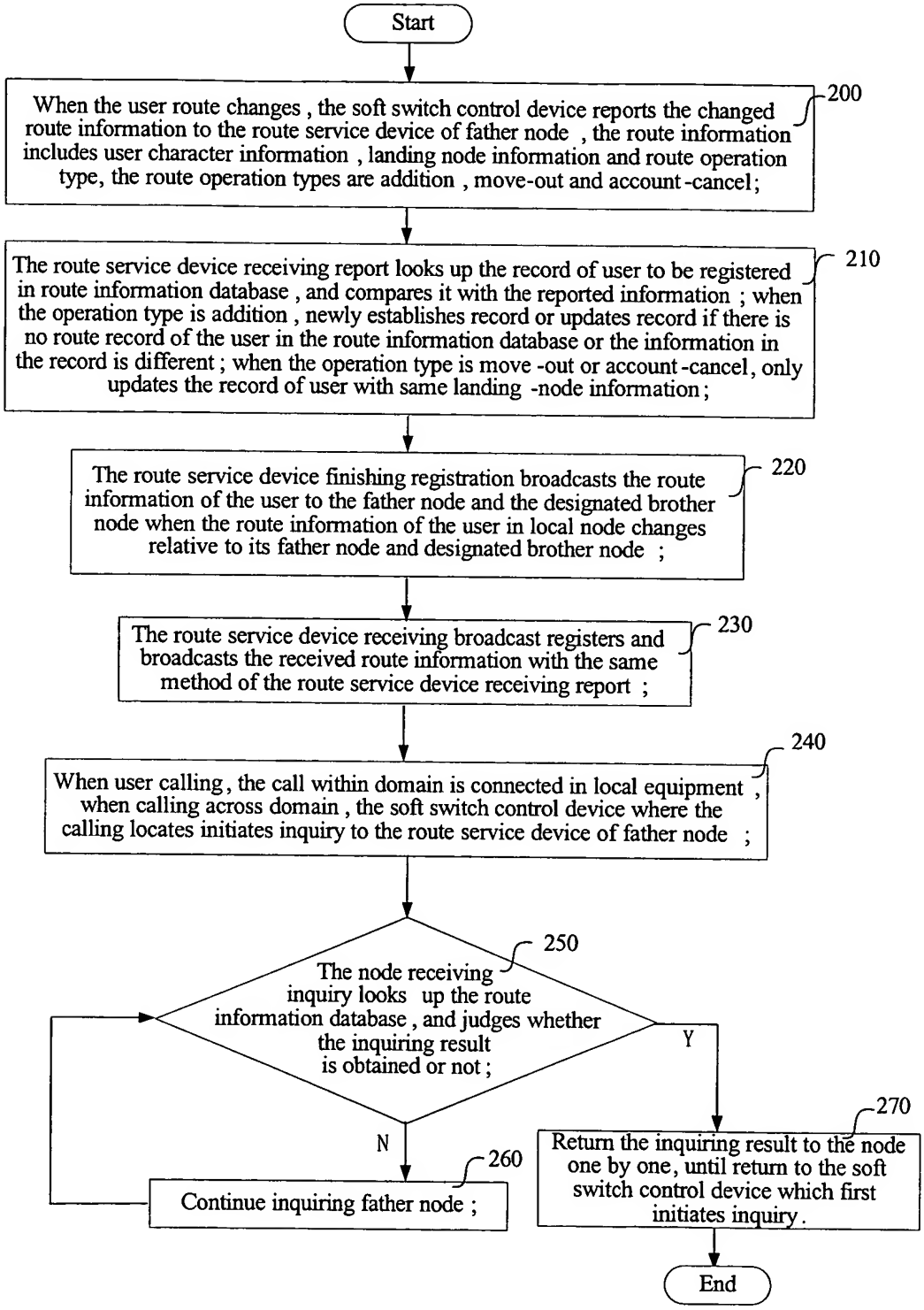
Start
When the user route changes , the soft switch control device reports the changed route information to the route service device of father node , the route information includes user character information , landing node information and route operation type, the route operation types are addition , move-out and account-cancel;
200
The route service device receiving report looks up the record of user to be registered in route information database , and compares it with the reported information ; when the operation type is addition , newly establishes record or updates record if there is no route record of the user in the route information database or the information in the record is different ; when the operation type is move -out or account -cancel, only updates the record of user with same landing -node information ;
210
The route service device finishing registration broadcasts the route information of the user to the father node and the designated brother node when the route information of the user in local node changes relative to its father node and designated brother node ;
220
The route service device receiving broadcast registers and broadcasts the received route information with the same method of the route service device receiving report ;
230
When user calling, the call within domain is connected in local equipment , when calling across domain , the soft switch control device where the calling locates initiates inquiry to the route service device of father node ;
240
The node receiving inquiry looks up the route information database , and judges whether the inquiring result is obtained or not ;
250
Y
N
Continue inquiring father node ;
260
Return the inquiring result to the node one by one, until return to the soft switch control device which first initiates inquiry .
270
End

Fig4